ABSTRACT

Aspects of a switch matrix circuit are provided. In accordance with a circuit aspect, a plurality of switches are organized in a row and column configuration. Coupled to the plurality of switches is a current sensing circuit. The current sensing circuit includes a transistor and at least one resistor per column of the plurality of switches. Current amplified by the transistor and converted by the at least one resistor in a column is sensed as a logic level indicative of a switch status within the column for a selected row. The current sensing arrangement may also be used in an embodiment utilizing bi-directional signal control to minimize the number of I/O lines required to scan the switch matrix. The bi-directional signal scanning may also be implemented in another embodiment that senses voltage levels to determine switch closures.